

## **REMARKS**

In the Office Action mailed October 10, 2003, in the above identified application, the examiner rejected applicants' claims 1-15 with primary reliance upon the cited Knuth reference, U.S. Patent 3,399,776. More particularly, the examiner rejected claims 1-3, 6-10 and 12 for alleged anticipation under 35 USC 102(b) specification in view of the Knuth reference. The examiner also rejected the remaining claims 4, 5, 11 and 13-15 for alleged obviousness under 35 USC 103 in view of the cited Knuth reference, considered in combination with Lentz, U.S. Patent 1,861,805 (claims 4, 11, and 13-15) or Hoffmann, U.S. Publ. US 2002/0104794 A1 (claim 5).

In addition, the examiner objected to the as-filed language of claim 8, noting the occurrence of a typographical error therein.

In response, applicant has amended claim 1 to incorporate the limitations from original dependent claim 2. Related dependent claim 3 has been edited for conformance with parent claim 1 as now presented. Original dependent claims 2, 8 (thereby obviating the objection thereto) and 9 have been canceled.

With these revisions, applicants respectfully submit claims 1, 3-7 and 10-15 for reconsideration and allowance, particularly for the reasons noted in the following remarks.

### **Brief Discussion of The Claims as Now Presented**

The invention disclosed and claimed in this application is directed to an improved filter manifold for a water purification system, wherein one or more filter-type cartridges are provided for treating water from a suitable water supply source, and for delivering the treated water from the filter manifold for dispensing, and/or for storage within a suitable reservoir prior to dispensing. Each filter cartridge is adapted for periodic removal from the manifold, and for replacement on an as-needed basis. In accordance with the invention, a fail-safe system is provided for insuring that the water supply is turned off, before a filter cartridge can be removed from the filter manifold.

More particularly, as now recited in more detail in amended independent claim 1, applicants' concept includes the "filter manifold" for removably receiving

“at least one filter element”. The “filter manifold” is connected to a “water supply conduit” for receiving a flow of water, and the “filter element” operates to produce relatively purified water. Claim 1 further recites a “latch plate” movable between a “latched” position and an “unlatched” position for respectively preventing and permitting filter element removal from the “filter manifold”. Claim 1 also recites “lock means” movable between a “first” position and a “second” position for respectively preventing and permitting movement of the “latch plate” from the latched to unlatched positions. That is, before the “latch plate” can be shifted from its “latched” position to the “unlatched” position, it is first necessary to shift the “lock means” from its “first” or locked position to the “second” or unlocked position.

As now presented, claim 1 additionally requires this “lock means” to include a “shut-off valve” for shutting off water flow to and through said “water supply conduit”, whenever the “lock means” is in the “second position”.

This claimed construction inherently and necessarily requires a two-step process for removing a used or spent filter element from the filter manifold, wherein the first step of that two-step process requires the water supply to be turned off. That is, unless and until the water supply is turned off, the filter element remains locked in place, and cannot be removed inadvertently, accidentally, or prematurely from the filter manifold. The step of shutting off the water supply, by movement of the “lock means”, also frees the “latch plate” for subsequent movement from the latched position to the unlatched position so that the filter element can then, and only then, be removed for replacement.

This claimed system, and its inherent two-step procedure for filter element removal (with the water supply being turned off in the first step), is not disclosed or suggested in the cited art. In particular, the Knuth reference does not disclose or suggest a two-step procedure, but instead seeks to manipulate multiple structures on a concurrent basis. In Knuth, this “concurrent” approach does not present problems, because Knuth does not in fact have a “shut-off” valve in his system. In this regard, the examiner’s characterization of the valves 14 and 14’ in Knuth as a “shut-off” valve is simply incorrect.

Accordingly, applicants respectfully submit claim 1 as now amended for reconsideration and allowance, together with its remaining dependent claims 3-7.

In addition, applicant notes that independent claims 10 and 13 are resubmitted without revision for reconsideration and allowance. Claim 10 recites applicants' invention as an improvement to a water purification system wherein "shut-off valve means" includes a valve movable between "open and closed positions" for respectively permitting and preventing water flow to a "filter element", and a "valve actuator" movable between "first and second positions" for respectively moving the valve. Importantly, when the "valve actuator" is in the "first" position, it obstructs and thereby prevents movement of a "latch plate" from a latched position to an unlatched position respectively preventing and permitting removal of the filter element from the filter manifold.

Claim 13 incorporates limitations similar to claim 10, but recites a system arrangement wherein multiple filter elements are removably mounted on the filter manifold. As claimed, a "latch member" is movable between latched and unlatched positions, and "shut-off valve means" includes "actuator means" movable between a first position permitting water flow while obstructing removal of the filter elements, and a second position preventing water flow while permitting filter element removal.

Similar to claim 1, these claims 10 and 13 thus also recite a system that requires the two-step procedure for removing and replacing a filter element, wherein the first step always requires the water supply to be turned off. Since this concept is not disclosed or suggested in the cited art, as noted above, claims 10 and 13, together with their respective sets of dependent claims 11-12 and 14-15 are also resubmitted for reconsideration and allowance.

#### **Discussion of the Cited References**

As previously noted herein, all rejections asserted by the examiner in the Office Action rely primarily or entirely upon the cited Knuth reference. According to the examiner, Knuth shows a water purification/filter system including a purported "shut-off valve (14, 14') for shutting off water flow through said water supply conduit to said filter manifold when said lock means is in said second

position". Office Action, p. 3, para. 5. See also Office Action, p. 6, para. 11, and p. 9, para. 17.

Applicants respectfully suggest that the examiner has misinterpreted the Knuth reference. Knuth does not have a "shut-off valve" for disconnecting water supply to his filter manifold at any time. Knuth also fails to disclose or suggest a two-step procedure wherein a true "shut-off valve" is necessarily and inherently closed before a filter element can be removed and replaced.

The Knuth reference discloses a valve body B or B' onto which a filter housing 20 encasing a filter element or cartridge 28 can be assembled. The valve body B, B' includes a flow path extending between an inlet to an outlet, with a valve 14, 14' provided mid-way along this flow path. On opposite sides of the valve 14, 14', Knuth provides a pair of valved couplers 33 adapted for quick-release connection by means of slidable sleeves 37, 38 and lock balls 50 with a pair of nipples 32 respectively defining an inflow port and an outflow port on the filter housing 20. The gist of Knuth's invention is that the valve 14, 14' is closed when the filter housing 20 is mounted onto the valve body B, B', so that water will flow through the filter housing 20. Conversely, when Knuth's filter housing 20 is removed (e.g., to replace the filter element 28), the valve 14, 14' is opened to permit uninterrupted water flow (but without filtering) between the valve body inlet and outlet ends.

Clearly, Knuth's valve 14, 14' is NOT a shut-off valve for preventing water flow through a "water supply conduit" leading to the filter manifold. Knuth's valve 14, 14', notwithstanding the examiner's incorrect characterization thereof, simply does not function at any time to prevent water inflow to the valve body B, B'. That is, Knuth's valve 14, 14', even when closed, permits water inflow to the first valved coupler 33. Thus, to the extent that Knuth's valve 14, 14' shuts off a water flow, it does not shut off water flow to the filter manifold as claimed by applicants.

Moreover, applicants respectfully point out that Knuth's valve 14, 14' is open when the filter housing 20 is removed from the valve body B, B', and closed when the filter housing 20 is assembled with the valve body. This open/close sequence in Knuth is the exact opposite of that claimed by applicants, namely, that the "shut-off valve" is closed before a filter element can

be removed, and is opened only after the filter element is properly installed. Thus, to the extent that Knuth's valve 14, 14' opens and closes, it does so in a manner opposite to that recited in applicants' claims.

Knuth also provides a mechanism for shifting the position of his valve 14, 14' as the filter housing 20 is assembled with or removed from the valve body B, B'. But this mechanism in Knuth seeks to shift the valve 14, 14' "simultaneously" (col. 1, line 24) or "at the same time" (col. 3, line 29) as the filter housing 20 is installed or removed. This "simultaneously" or "at the same time" concept in Knuth is vastly different from the applicants' carefully claimed system which inherently and necessarily requires a two-step sequence in order to remove a filter element for replacement.

According to the express limitations of applicants' independent claims 1, 10 and 13, the "lock means" or "actuator means" must first be shifted to accomplish the dual functions of (i) shutting off the water supply and (ii) removing the obstruction to the "latch plate" or "latch member", when can then, and only then, be shifted to permit filter element removal. This system as claimed, and its inherent two-step sequence which involves turning off the water supply as a first step, is not found in the Knuth reference, directly or indirectly, for purposes of supporting a rejection of these claims for anticipation or obviousness. Applicants' claims 1, 3-7 and 10-15 are thus submitted for allowance.

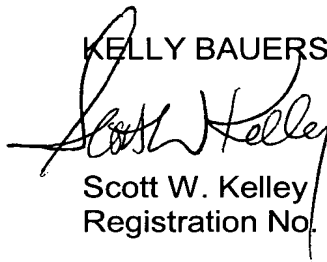
Applicants have reviewed the remaining cited references of record, and respectfully submit that these references do not include any teaching or suggestion capable of overcoming the above-discussed deficiencies of Knuth. Of these references, applicants point out that the Lentz and Hoffmann references fail to incorporate any aspect of applicants' requisite two-step sequence for requiring a water supply to be turned off before a cartridge element can be removed from a manifold for replacement.

### **Conclusion**

In conclusion, in view of the foregoing discussion, claims 1, 3-7 and 10-15 are believed to distinguish clearly and patentably from the cited references. A formal Notice of Allowance is believed to be in order, and is therefore respectfully requested.

Respectfully submitted,

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A handwritten signature in black ink, appearing to read "Scott W. Kelley", is written over the printed name.

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